

DESIGN/PROCESS CHANGE NOTIFICATION -- FINAL

This is to inform you that a design and/or process change will be made to the following product(s). This notification is for your information and concurrence.

If you require data or samples to qualify this change, please contact **Fairchild Semiconductor within 30 days of receipt of this notification.**

Updated process quality documentation, such as FMEAs and Control Plans, are available for viewing upon request.

If you have any questions concerning this change, please contact:

Technical Contact:

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Implementation of change:

Expected 1st Device Shipment Date: 2011/08/15

Earliest Year/Work Week of Changed Product: 1134

Change Type Description: Lead Finish Composition

Description of Change (From): Fairchild's 6-, 8- and 10-lead Micropak MLP and 8-, 10-, 16-, and 24-lead UMLP premolded packages are currently assembled with matte tin plating. These parts are identified by an \_F113 suffix on Fairchild orderable part number.

Description of Change (To): Fairchild's 6-, 8- and 10-lead Micropak MLP and 8-, 10-, 16-, and 24-lead UMLP premolded packages will be assembled with nickel-palladium-gold (NiPdAu) lead finish. The \_F113 suffix will no longer be included in the orderable part number.

Reason for Change : Process standardization. Fairchild has successfully shipped millions of products in the MLP package using NiPdAu finish. This change is simply an expansion of nickel-palladium-gold lead finish to these packages. This change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Product incorporating this change may be shipped interchangeably with existing unchanged products. This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local Fairchild Sales representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days. Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples.

Qual/REL Plan Number(s): Q20100050

Qualification :

Products assembled with NiPdAu plating have passed all of Fairchild's qualification requirement and are therefore approved for production.

#### Change From

|               |                                                               |
|---------------|---------------------------------------------------------------|
| Assembly Site | FSPM (Fairchild Malaysia)                                     |
| Leadframe     | Leadframe based package: Cu A194, FH, NiPdAu flash pre-plated |
| Die Attach    | Die Attach Film, LE5003                                       |
| Wire          | 0.8mils Au                                                    |
| Mold Compound | CK203P (Premolded), CK203M (Final Mold)                       |
| Lead Finish   | Matte Sn                                                      |
| Product ID    | a suffix of F113 used to identify product assembled at FSPM   |

#### Change To

|               |                                                               |
|---------------|---------------------------------------------------------------|
| Assembly Site | FSPM (Fairchild Malaysia)                                     |
| Leadframe     | Leadframe based package: Cu A194, FH, NiPdAu flash pre-plated |
| Die Attach    | Die Attach Film, LE5003                                       |
| Wire          | 0.8mils Au                                                    |
| Mold Compound | CK203P (Premolded), CK203M (Final Mold)                       |
| Lead Finish   | NiPdAu                                                        |
| Product ID    | a suffix of 'F113' flow will no longer be used.               |

### Results/Discussion for Qual Plan Number(s): Q20100050

|                                                                                                |                 |          |              |              |
|------------------------------------------------------------------------------------------------|-----------------|----------|--------------|--------------|
| Test: (Highly Accelerated Stress Test)   Conditions: 85%RH, 130C, 4.0V   Standard: JESD22-A110 |                 |          |              |              |
| Lot                                                                                            | Device          | 96-HOURS | 192          | Failure Code |
| Q20100050DAHAST1A                                                                              | FSSD06UMX_F113  | 0/45     |              |              |
| Q20100050DAHAST1A                                                                              | FSSD06UMX_F113  |          | 0/45         |              |
| Test: (Highly Accelerated Stress Test)   Conditions: 85%RH, 130C, 4.4V   Standard: JESD22-A110 |                 |          |              |              |
| Lot                                                                                            | Device          | 96-HOURS | 192          | Failure Code |
| Q20100050AAHAST1A                                                                              | FSA6157L6X      | 0/45     |              |              |
| Q20100050AAHAST1A                                                                              | FSA6157L6X      |          | 0/45         |              |
| Q20100050BAHAST1A                                                                              | FSA2268L10X     | 0/45     |              |              |
| Q20100050BAHAST1A                                                                              | FSA2268L10X     |          | 0/45         |              |
| Q20100050CAHAST1A                                                                              | FSA2268UMX_F113 | 0/45     |              |              |
| Q20100050CAHAST1A                                                                              | FSA2268UMX_F113 |          | 0/45         |              |
| Test: (Moisture Sensitivity)   Conditions:   Standard: J-STD_020                               |                 |          |              |              |
| Lot                                                                                            | Device          | Results  | Failure Code |              |
| Q20100050AAMSLNL1AA                                                                            | FSA6157L6X      | 0/11     |              |              |
| Q20100050BAMSLNL1AA                                                                            | FSA2268L10X     | 0/11     |              |              |
| Q20100050CAMSLNL1AA                                                                            | FSA2268UMX_F113 | 0/11     |              |              |
| Q20100050DAMSLNL1AA                                                                            | FSSD06UMX_F113  | 0/11     |              |              |
| Test: (Physical Dimensions)   Conditions:   Standard: JESD22-B100                              |                 |          |              |              |
| Lot                                                                                            | Device          | Results  | Failure Code |              |
| Q20100050AAPHYDA                                                                               | FSA6157L6X      | 0/5      |              |              |
| Q20100050BAPHYDA                                                                               | FSA2268L10X     | 0/5      |              |              |
| Q20100050CAPHYDA                                                                               | FSA2268UMX_F113 | 0/5      |              |              |
| Q20100050DAPHYDA                                                                               | FSSD06UMX_F113  | 0/5      |              |              |
| Test: (Precondition)   Conditions:   Standard: JESD22-A113                                     |                 |          |              |              |
| Lot                                                                                            | Device          | Results  | Failure Code |              |
| Q20100050AAPCNL1AA                                                                             | FSA6157L6X      | 0/122    |              |              |
| Q20100050BAPCNL1AA                                                                             | FSA2268L10X     | 0/122    |              |              |
| Q20100050CAPCNL1AA                                                                             | FSA2268UMX_F113 | 0/122    |              |              |
| Q20100050DAPCNL1AA                                                                             | FSSD06UMX_F113  | 0/122    |              |              |
| Test: (Solderability)   Conditions:   Standard: JESD22-B102                                    |                 |          |              |              |
| Lot                                                                                            | Device          | Results  | Failure Code |              |
| Q20100050AASOLDCAA                                                                             | FSA6157L6X      | 0/25     |              |              |
| Q20100050AASOLDCBA                                                                             | FSA6157L6X      | 0/25     |              |              |
| Q20100050BASOLDCAA                                                                             | FSA2268L10X     | 0/25     |              |              |
| Q20100050BASOLDCBA                                                                             | FSA2268L10X     | 0/25     |              |              |
| Q20100050CASOLDCAA                                                                             | FSA2268UMX_F113 | 0/25     |              |              |
| Q20100050CASOLDCBA                                                                             | FSA2268UMX_F113 | 0/25     |              |              |
| Q20100050DASOLDCAA                                                                             | FSSD06UMX_F113  | 0/25     |              |              |

|                                                                            |                 |            |            |
|----------------------------------------------------------------------------|-----------------|------------|------------|
| Q20100050DASOLDCBA                                                         | FSSD06UMX_F113  | 0/25       |            |
| Test: (Temperature Cycle)   Conditions: -65C, 150C   Standard: JESD22-A104 |                 |            |            |
| Lot                                                                        | Device          | 100-CYCLES | 500-CYCLES |
| Q20100050AATMCL1A                                                          | FSA6157L6X      | 0/77       |            |
|                                                                            |                 |            | 0/77       |
|                                                                            |                 |            | 0/77       |
| Q20100050BATMCL1A                                                          | FSA2268L10X     | 0/77       |            |
|                                                                            |                 |            | 0/77       |
|                                                                            |                 |            | 0/77       |
| Q20100050CATMCL1A                                                          | FSA2268UMX_F113 | 0/77       |            |
|                                                                            |                 |            | 0/77       |
|                                                                            |                 |            | 0/77       |
| Q20100050DATMCL1A                                                          | FSSD06UMX_F113  | 0/77       |            |
|                                                                            |                 |            | 0/77       |
|                                                                            |                 |            | 0/77       |

Product Id Description :

Affected FSIDs :

|                    |                    |                   |
|--------------------|--------------------|-------------------|
| 74AUP1G58L6X       | 74AUP1G97L6X       | 74AUP1G97L6X_F131 |
| 74AUP1G98L6X       | 74AUP1T97L6X       | FAN3988IL6X_F113  |
| FAN4010IL6X_F113   | FAN5624UMPX        | FAN5626LX         |
| FMS6151L6X_F113    | FSA110UMX_F113     | FSA1156L6X_F113   |
| FSA1256AL8X_F113   | FSA1256L8X_F113    | FSA1257L8X_F113   |
| FSA2000UMX         | FSA201L10X_F113    | FSA2156L6X_F113   |
| FSA221L10X_F113    | FSA221UMX_F113     | FSA223L10X_F113   |
| FSA223UMX_F113     | FSA2258L10X        | FSA2259UMX        |
| FSA2267AL10X_F113  | FSA2267L10X_F113   | FSA2268L10X       |
| FSA2268L10X_F113   | FSA2268TUMX_F113   | FSA2268UMX_F113   |
| FSA2269L10X_F113   | FSA2269TSL10X_F113 | FSA2269TUMX_F113  |
| FSA2269UMX_F113    | FSA2270TUMX_F113   | FSA2271TUMX_F113  |
| FSA2457UMX         | FSA2457UMX_F113    | FSA2466UMX        |
| FSA2467UMX_F113    | FSA2567UMX_F113    | FSA266L8X_F113    |
| FSA3157BL6X        | FSA3157BL6X_F113   | FSA3200UMX        |
| FSA321UMX          | FSA321UMX_F113     | FSA3357L8X_F113   |
| FSA4157AL6X_F113   | FSA4157L6X_F113    | FSA4159L6X        |
| FSA4159L6X_F113    | FSA5157L6X_F113    | FSA6157L6X        |
| FSA6157L6X_F113    | FSA642UMX          | FSA642UMX_F113    |
| FSA8008UMX         | FSA8009UMX         | FSA800UMX         |
| FSA800UMX_F113     | FSA801UMX          | FSA8029UMX        |
| FSSD06UMX          | FSSD06UMX_F113     | FSSD07UMX         |
| FSSD07UMX_F113     | FSUSB103UMX_F113   | FSUSB104UMX       |
| FSUSB104UMX_F113   | FSUSB20L10X_F113   | FSUSB23L10X_F113  |
| FSUSB30L10X_F113   | FSUSB30UMX_F113    | FSUSB31L8X_F113   |
| FSUSB31UMX         | FSUSB31UMX_F113    | FSUSB40L10X_F113  |
| FSUSB40UMX_F113    | FSUSB42UMX_F113    | FSUSB43L10X       |
| FSUSB43L10X_F113   | FSUSB43L10X_F131   | FSUSB46L8X_F113   |
| FSUSB46L8X_F130    | FSUSB46UMX         | FSUSB46UMX_F113   |
| FT7521L6X          | FT8010UMX          | FXL2T245L10X_F113 |
| FXL2TD245L10X_F113 | FXL4TD245UMX       | FXL4TD245UMX_F113 |
| FXLA101L6X         | FXLA104UMX         | FXLA2203UMX       |
| FXLP34L6X_F113     | FXMA2102L8X        | FXMA2102UMX       |
| NC7NP14L8X_F113    | NC7NZ14L8X_F113    | NC7S00L6X_F113    |

|                   |                  |                  |
|-------------------|------------------|------------------|
| NC7S02L6X_F113    | NC7S04L6X_F113   | NC7S08L6X_F113   |
| NC7S14L6X_F113    | NC7S32L6X_F113   | NC7S86L6X_F113   |
| NC7SB3157L6X_F113 | NC7SP04L6X_F113  | NC7SP08L6X_F113  |
| NC7SP126L6X_F113  | NC7SP17L6X_F113  | NC7SP74L8X_F113  |
| NC7ST00L6X_F113   | NC7ST02L6X_F113  | NC7ST04L6X_F113  |
| NC7ST08L6X_F113   | NC7ST32L6X_F113  | NC7ST86L6X_F113  |
| NC7SU04L6X_F113   | NC7SV00L6X_F113  | NC7SV02L6X_F113  |
| NC7SV04L6X_F113   | NC7SV04L6X_F131  | NC7SV05L6X_F113  |
| NC7SV08L6X_F113   | NC7SV17L6X_F113  | NC7SV32L6X_F113  |
| NC7SV32L6X_F131   | NC7SV57L6X_F113  | NC7SV58L6X_F113  |
| NC7SV58L6X_F131   | NC7SV74L8X_F113  | NC7SVL04L6X_F113 |
| NC7SVL08L6X_F113  | NC7SVL32L6X_F113 | NC7SZ00L6X_F113  |
| NC7SZ02L6X_F113   | NC7SZ04L6X_F113  | NC7SZ05L6X_F113  |
| NC7SZ08L6X_F113   | NC7SZ125L6X_F113 | NC7SZ126L6X_F113 |
| NC7SZ14L6X_F113   | NC7SZ157L6X_F113 | NC7SZ175L6X_F113 |
| NC7SZ175L6X_F131  | NC7SZ18L6X_F113  | NC7SZ19L6X_F113  |
| NC7SZ32L6X_F113   | NC7SZ374L6X_F113 | NC7SZ38L6X_F113  |
| NC7SZ57L6X_F113   | NC7SZ58L6X_F113  | NC7SZ74L8X_F113  |
| NC7SZ86L6X_F113   | NC7SZU04L6X_F113 | NC7WB66L8X_F113  |
| NC7WP00L8X_F113   | NC7WP02L8X_F113  | NC7WP08L8X_F113  |
| NC7WP32L8X_F113   | NC7WZ00L8X_F113  | NC7WZ02L8X_F113  |
| NC7WZ04L6X_F113   | NC7WZ07L6X_F113  | NC7WZ08L8X_F113  |
| NC7WZ125L8X_F113  | NC7WZ126L8X_F113 | NC7WZ14L6X_F113  |
| NC7WZ16L6X_F113   | NC7WZ17L6X_F113  | NC7WZ86L8X_F113  |